

## CLAIMS

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent is:

1           1 A simulator for inserting simulated network  
2 frames onto a physical medium for delivery to a system  
3 under test over a network, the simulator comprising:  
4           a split bridge device having a network interface  
5 card for to communicating to a network via said network  
6 interface card;  
7           a frame generator coupled to said split bridge  
8 device for generating one or more simulated network  
9 frames according to a specific network communications  
10 protocol, said split bridge device transferring one or  
11 more simulated network frames from the frame generator to  
12 said system under test via the network to simulate  
13 traffic of multiple virtual clients and receiving said  
14 one or more network frames based on a unique identifier  
15 combined with bridge routing information associated with  
16 said one or more simulated network frames whereby  
17 multiple virtual clients are simulated.

1           2. The simulator as claimed in claim 1, wherein the  
2 frame generator is coupled to the split bridge device via  
3 a channel connection.

1           3. The network simulator as claimed in claim 1,  
2 wherein the frame generator is coupled to the split  
3 bridge via an OSA connection (Open System Adapter)  
4 connection.

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1 4. A simulator enabling insertion of simulated  
2 network frames onto a physical medium for delivery to a  
3 system under test implementing one or more servers to  
4 achieve load balancing across a network, said simulator  
5 comprising:

6 a plurality of split bridges each having a network  
7 interface card, each of said plurality of split bridges  
8 connected to a respective one of said one or more servers  
9 employed for load balancing and enabled to communicate  
10 via a respective network interface card to said network;

11 a primary split bridge responsive to a broadcast  
12 message received via the network interface card  
13 immediately responding thereto, and a secondary split  
14 bridge responsive to the broadcast message received via  
15 the network interface card for delaying a response for a  
16 predetermined amount of time;

17 wherein subsequent messages are sent only to the  
18 primary split bridge of said plurality of split bridges  
19 that responded to said broadcast message.

1 5. A method for inserting simulated network frames  
2 onto a physical medium for delivery to a system under  
3 test, said method comprising:

4 connecting a split bridge with a network interface  
5 card having a unique identifier to a network;

6 receiving network frames from a frame generator  
7 coupled to the split bridge;

8 configuring routing information in the split bridge  
9 to include identifiers associated to said network frames,  
10 said identifiers emulating identifiers of plurality of  
11 client workstations;

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12 forwarding received simulated network frames onto  
13 the network via the network interface card.

1 6. The method for inserting simulated network  
2 frames onto a physical medium as claimed in claim 5, said  
3 method further including:

4 receiving network frames representing replies from a  
5 server designated for said plurality of client  
6 workstations based on the configured routing information  
7 having unique frame identifiers representing said  
8 plurality of client workstations.

1 7. A method for inserting simulated network frames  
2 onto a physical medium for delivery to a system under  
3 test implementing one or more servers to achieve load  
4 balancing, said method comprising:

5 connecting a split bridge for each server in a load  
6 balancing system having a plurality of servers;

7 a primary of said split bridges transmitting a  
8 client request immediately to a first server connected to  
9 said primary split bridge;

10 secondary of said split bridges transmitting a  
11 client request after a predetermined amount of time to a  
12 second server connected to the secondary split bridge;  
13 and

14 transmitting subsequent client requests to the  
15 primary of said split bridges replying to the client  
16 request.

1 8. A program storage device readable by machine,  
2 tangibly embodying a program of instructions executable  
3 by the machine to perform the method steps of inserting

